DOCUMENT RESUME

ED 160 566 SP 013 091

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TITLE Beginning the Program. Project DEEP (Diversified Educational Experiences Program).
NOTE 40p.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Cooperative Planning; Dropouts; *Group Experience; *Humanistic Education; *Open Education; Peer Relationship; Secondary Education; *Self Directed Classrooms; Student Attitudes; Student Teacher Relationship; Teaching Styles

ABSTRACT

Project DEEP (Diversified Educational Experience Program) was developed to improve the behavior and attitudes of secondary students in schools where dropouts, absenteeism, and poor attitudes are existing problems. The open classroom with student involvement and participation in goal setting, presentation, and evaluation is the basic concept of this project. The DEEP model is flexible; it can be modified to meet a variety of educational situations and may be adopted for use within the traditional secondary school. Profiles of the attitudes of participants in this project are presented in this report, and descriptions of teacher student relationships and typical DEEP classroom are provided. Suggested materials and equipment used in such a classroom are discussed. (JD)

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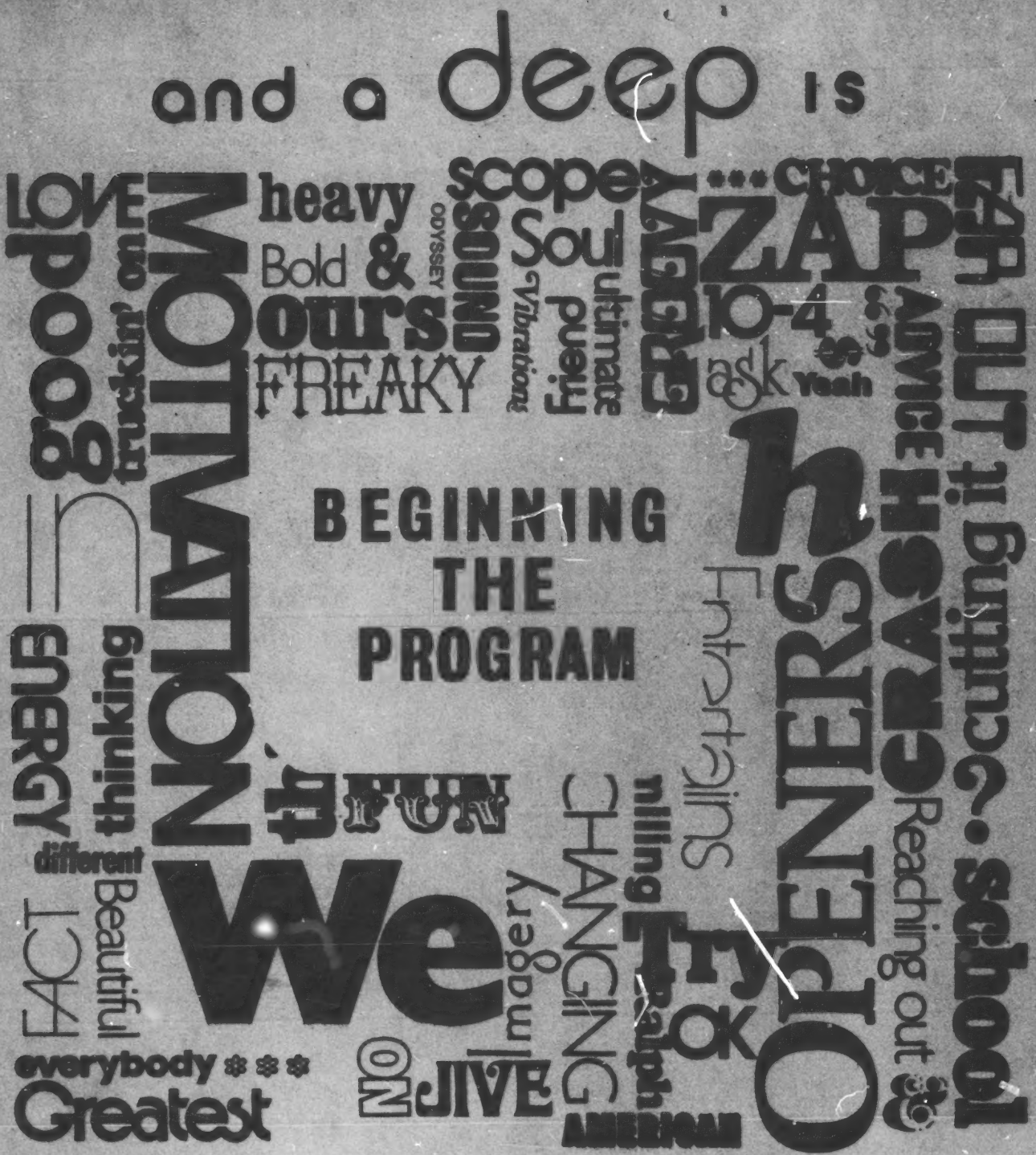

PROJECT DEEP

(DIVERSIFIED EDUCATIONAL EXPERIENCES PROGRAM)

SP013 091

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Other DEEP materials:

"What Is a DEEP?"
"Suggested Materials for the DEEP Classroom"
TECHNIQUES OF CLASSROOM MANAGEMENT
"Project DEEP" filmstrip/cassette tape

PROJECT DEEP, an alternative classroom management system was developed in the

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PROJECT DEEP is an exemplary education program of the

National Diffusion Network
United State Office of Education
Washington, D. C.

PROJECT DEEP: THE PHILOSOPHY

Some may ask, "Why move to the kind of situation known as open classroom?" Before Project DEEP was conceived, the three classroom teachers who developed this program were concerned with student alienation from school, the drop-out rate in required academic courses, and the general negative attitude of students to the public school experience. It was recognized that something was wrong, but, at the beginning stages, it was difficult to determine exactly what the problems were and what remedies for the situation exist. We were all familiar with the bastardization of Dewey's theory of progressive education and its bad name in many educational circles. We were aware that classrooms without structure were doomed to failure.

Visiting a successful open classroom situation for the first time may appear to the observer to be a good example of role-reversal situation. Students are responsible for taking their own attendance by indicating each day on a wall chart where they are going and what they are doing. Many students report to the class and then leave to go out into the community to gather data for projects with which their respective groups are working.

Students in groups develop goals and objectives for their projects and spend from several days to several weeks in research and preparation. After the projects are completed, the students all meet together to see the final presentations, to discuss them and related materials, and to go through a process of evaluation.

The evaluation which follows the topic selection, research, preparation, and debriefing is different in that the teacher is not the only one actively participating in the evaluation process. The students in the class, partici-

pating in the debriefing, evaluate each project. The students who developed and presented the project, as well as the teacher, participate in the evaluation.

In order to understand more thoroughly the ways in which the DEEP classroom management model differs from other management models, it is necessary to look closely at four components of the model: (1) DEEP teachers (2) DEEP Teacher-Student Relationships 3) DEEP students, and (4) the DEEP classroom. Most of the concepts taken individually do not appear revolutionary, but together they form a unique approach to instruction.

DEEP Teachers

DEEP teachers believe that all students have a need to learn more about the world in which they live, and that given the opportunity those same students will become responsible for their own learning. DEEP teachers believe in the worth of all students as individuals and in their ability to learn on their own through teacher guidance. These teachers are convinced that students learn in different ways and that the teacher's responsibility is to find the best way for each student to master that which that student wishes and needs to learn. This calls for a great deal of individuation: students setting their own goals, finding ways to accomplish those goals, and assessing their accomplishments.

A DEEP teacher has a positive self image. This image consists of the following characteristics:

1. a strong knowledge of subject matter, its importance, and how it can be learned by others
2. a willingness to change when such a change will benefit the students as they attempt to acquire knowledge about a specific set of subject matter

3. the ability to look seriously at teaching activities and evaluate them using both student-determined and teacher-established criteria
4. a willingness to take risks by allowing both the student and the teacher to venture into unknown territories in the attempt to grow both intellectually and socially
5. the ability and willingness to share knowledge and to encourage students to share their new-found knowledge as a result of investigations
6. an optimistic outlook toward the world, education, and student growth
7. tenacity toward completing jobs started by the student as well as those begun by the teacher
8. the ability to deal with much more dissonance than is found in most classrooms
9. a willingness to share both classroom control and planning time

DEEP Teacher-Student Relationships

DEEP teacher-student relationships are primarily characterized by openness, as explained below:

1. The teacher must accept students for what they are at the present time and not make judgments about past performances. This involves setting aside peer review, rumor, past grade performances, and test scores. Similarly, it means viewing the students as individuals with both potential and worth. This is a difficult task because students' reputations follow them through informal communication networks.
2. Students, on the other hand, must believe that the teacher is open and willing to "start anew." Trust is the key concept in

regard to student-teacher relationships. There can be no hidden agendas, no undisclosed motives, no favoritism. There can be only trust and honesty.

3. The DEEP teacher-student relationship is one of shared responsibility. Students create goals through an interaction between the teacher's needs and the students' wishes. Students accomplish these goals with the aid of the teacher. They evaluate their accomplishments with the help of their peers and the teacher and by using their own criteria. They are in charge of their own successes or failures. They are just as responsible as the teacher.

DEEP Students

As active participants in and determiners of their own learning, DEEP students

1. possess a feeling of ownership toward their class by recognizing that the class belongs to them and is a tool for fulfilling their needs and expectations;
2. accept responsibility for their attendance, for their participation, for their successes, and even for their failures; they learn to expect success, but they also learn to accept responsibility for their failures and to learn from their mistakes;
3. are willing to take risks or, at least, to grow in risk-taking by sharing their ideas and feelings with other members of the class, thereby developing trust in others and in themselves;
4. cooperate with classmates because they perceive that only through a give-and-take situation can they achieve their goals;

5. plan and carry through tasks by carefully allotting their time and resources toward a specific goal;
6. learn to negotiate with other members of the class, with individuals, with other groups, and with their teacher in determining the conditions concerning the subjects of their projects, the best methods for presentation, the schedule of their time, and the methods by which they will communicate their feelings;
7. participate in their own evaluations and in developing the criteria by which they will be evaluated;
8. carry over the knowledge and the skills they have learned in the DEEP classroom to their relationships with people and in solving their problems; they learn to use verbal skills and different ways to communicate; they learn to recognize problems, to outline alternatives, and to set priorities; they develop contingencies and make knowledgeable choices;
9. feel better about school through an enhanced self-image and elimination of feelings of alienation.

The DEEP Classroom

A DEEP classroom is exciting, often noisy, and a place where students like to go. A DEEP classroom might include the following characteristics and purposes:

1. Furniture is not fixed, but is flexible for both the teacher and the student to move as needed.
2. Students work in both large and small groups.
3. Electronic and non-electronic media are available for students to use in the development of their learning projects.

4. Students are given administrative responsibility for keeping daily attendance.
5. A "learning events" calendar is posted for student inspection and input.
6. Classroom tension and anxieties are reduced.
7. DEEP students carry over their skills into other classrooms and/or co-curricular activities.
8. The community is utilized as a resource by the student. This includes museums, libraries, governmental agencies, and citizens.

OPEN LEARNING - BEGINNINGS

When beginning an open learning environment, certain factors must be considered:

(A) Secondary students come to academic classrooms with certain assumptions. Those assumptions can cause problems and ought to be dealt with early. Some of the students' assumptions are

1. The teacher makes all decisions as to what will be studied and when.
2. The teacher has special and exclusive knowledge of the "basics" for the course.
3. Learning consists of collecting, storing and recall of data.
4. Learning is boring. Therefore, if what I do in school is not boring, then it is not learning (school work).
5. Every question has an expected correct answer. Therefore, questions asking students to interpret, analyze, or synthesize data, or to require a student to express a conclusion or opinion on data, are unfamiliar and new and will cause some frustrations. Students do not generally understand that they are entitled to express an opinion (to think). Most students will feel it is unfair of the teacher to ask them to think. (School is not for thinking, but for giving correct answers.)

6. Lack of specific direction as to task (choice) means that one of the choices is "no work required"; i.e., if the teacher doesn't tell me what to do, I don't have to do anything.

7. The grade or evaluation depends upon pleasing the teacher; therefore, if the teacher does not cooperate and insists that the student must participate in determining the evaluation, students will be suspicious.

It is obvious that open learning challenges all or parts of each of these assumptions. Planning for the beginning of school, therefore, must take into account these assumptions, and every effort must be made for students and parents to understand the assumptions that will be made in a DEEP classroom. These may vary, depending on the individual teacher, but ought to be defined and communicated.

(B) Sudden and drastic changes can cause problems. Generally change in learning is accomplished by taking the learner where he or she is and moving him or her in the desired direction. Learning is a continuum, not an absolute place. It is not only foolish, but impossible, to expect all learners to be at a specific place at a given time on that continuum: i.e., everyone will have completed chapter 3 by next Monday.

Another problem most of us encounter in building an open learning environment is that we must change too. Not only is this a new learning environment for students, but it is also a new instructional environment for the teacher. New attitudes and assumptions about learning must be made by the

teacher. All of us must come to these attitudes in our own time. Burning all our bridges behind us and making 180 degree changes may seem very brave. It is also very foolish and will probably result in a high degree of frustration and failure.

What attitudes and changes in philosophy and attitude occur within the mind of the teacher?

1. Wasted time consists of assigning and covering the same material with everyone. (At least we covered the material.) Just sitting and thinking or planning (no visible evidence of school activity) is not wasted time.
2. Human beings have days when they need to collect themselves (get their heads together). Students are humans. This is a situation to be understood, accepted, and not lamented.
3. The word "basics" does not refer to a set of subject matter knowledge. Within any class there will be any number of "basics." Our job is to help students determine what their "basics" are and then plan learning experiences that will provide an opportunity to cover those "basics."
4. As a teacher I am not the center of attraction in the classroom. The question is not does the teacher know the answers to the questions (that's assumed), but rather, can the students understand the need for the questions and find the answers for themselves? The teacher is not the source from which all blessings and knowledge flow. We are, hopefully, planners and managers of learning environments.
5. Noise is a part of an experience-learning environment. When young people are involved in activity in which they have ownership,

there will be noise. A quiet classroom where one can hear a pin drop is obedience; it very likely is not a learning environment. A room where activity is not planned may have chaotic noise, and it very likely is not a learning environment. Understanding the difference between the two and finding that area of acceptable noise level for a learning environment and sanity requires for many of us an adjustment to a higher level of noise.

6. As systems managers we must be more creative and better organized than the teacher with a single lesson plan. Students will want us to answer questions like, "What do I have to do for a(n)___?" "Is this the way you want it?" "What do you want us to do?" We must be prepared to answer "how" questions and provide systems for getting things done. The "what" questions are primarily student responsibilities. Developing an attitude of answering questions with questions is hard because giving the answer is often so much easier.

7. Setting boundaries and keeping them firm is essential. Students will test these boundaries and the teacher. It is difficult to refrain from making judgmental statements to students at these times and to keep from exhibiting judgmental behavior when a student has pushed a boundary and has made the teacher suffer or hurt. It is hard not to judge this act. However, blaming a young person for being a young person is irrational. Developing the ability to identify student behavior, informing the student that the teacher understands the behavior and letting the student know the boundary is firm, but that the teacher doesn't blame him

for testing, is a teaching skill all of us need to develop. Being persons ourselves, it's hard not to respond personally. Remember, students are not testing the teacher as a person. They're testing the system and environment. (That's natural).
The teacher just happens to be a part of both.

RISK-TAKING, TRUST, AND OWNERSHIP

The DEEP philosophy of classroom management stresses three terms: risk-taking, trust, and ownership. An understanding of these terms is essential to an understanding of the program.

RISK-TAKING

The DEEP teacher must be willing to take risks, emotional risks, rather than physical risks, in relationships with students, and this is perhaps the most difficult thing for a teacher (or a human) to do. It involves making oneself vulnerable. The DEEP teacher may tell students, "This is a different kind of class. In this class we are going to treat one another as equals, as humans with feelings, fears, concerns, etc. We are going to be honest with one another. We are not going to play games." But, unless the teacher really subscribes to this philosophy and therefore demonstrates this attitude, students will not believe. And who can blame them? Students have learned that going to school, getting good grades, or at minimum, getting by without being hassled depends upon playing games, on saying what is expected and in behaving in accepted ways. Students will be at first suspicious of the teacher who claims to be entirely open and who elicits openness in return. The goal is for students to learn to be open with the teacher and <u>with one another</u>, and this behavior must be modeled by the teacher.

If this openness has grown through risk-taking, the teacher must be prepared to be told by students when the teacher falls short of this goal, i.e. "You said you weren't going to tell us what to do," or, worse, "Now you're acting like a teacher." Yet, if this risk-taking attitude is not nurtured, an open situation will not exist.

TRUST

Risk-taking leads to trust. Through taking risks teachers and students learn to trust one another. Trust grows from taking risks. Together teachers and students learn that trust involves openness and truthfulness without pain, or without hurting another's feelings. Trust evolves from frankness and openness and caring.

Trust is also related to non-valuing; that is, not making judgments about another's values in a polarized I'm-right-you're-wrong way. This is not to say that teachers should not express opinions. In developing trust, however, acceptance of the individual--I may not like what you did, but I do like you--is imperative.

OWNERSHIP

Ownership is the term we use to describe the feeling that DEFP students have for their class. Ownership is the student's feeling--this is my class. It was developed to meet my needs. My contributions to this class are not only important, they are essential. This class is my community and I am part of it. It is what I make of it.

Developing this feeling of ownership expands from risk-taking and trust. It involves not only asking the students for input, but also acting upon the students' decisions. Student projects and displays dominate the physical appearance of the room. Both environment and activities reflect the needs

and desires of students, rather than the convenience of the teacher. Students' being able to see something tangible that is theirs in a classroom and knowing that other students throughtout the day see their work as well goes a long way in demonstrating that the class actually belongs to students; but, more important, in ownership is the fact that students set their own goals, according to what is meaningful to them, plan and present their own projects and participate in their own evaluations.

One positive result of ownership perceived by most DEEP teachers is that vandalism and theft are reduced in the DEEP classroom. When students accept the concept that the classroom is theirs and the equipment and supplies in the classroom are theirs, for their own use, defacing and stealing are minimized.

LEARNING STYLES AND DEEP

Matching "learning styles" of students with "teaching styles" of teachers has become a concern recently voiced when groups of educators come together. The discoveries of Piaget and others of the ways in which humans learn, and, especially, concerning the deviations in the ways individual humans learn, causes us as educators to question the methods by which we have traditionally presented knowledge. No longer can we expect all students to absorb the same information, at the time, in the same way, from the teacher's Pierian spring.

There are a number of fallacies inherent in the traditional approach to teaching (lecturing, reading, note-taking, and testing). The first fallacy is that the teacher possesses the KNOWLEDGE. Granted, teachers do, or should, know more than students in the area in which they are instructing. However, with the information explosion and the often instant obsolescence of "facts," instructors can be confident no longer that the knowledge being imparted is indeed the "truth."

Another fallacy in the traditional approach concerns the relevancy of the information being presented. We would all agree that it is impossible, unnecessary, and even undesirable, for everyone to know the same information, but we each differ in our lists of the "basics" that everyone ought to know. Add to this quandary the concept that each of us learns only what is meaningful to us at a particular time, and the fact that any of us knows as much as he does may seem nothing short of a miracle. Who decides what information each of us needs? The only reliable authority is the learner himself.

The last fallacy deals with the manner in which the information is transmitted. The acquisition of knowledge is an ongoing process which cannot be and is never turned off, although we as educators have often complied with students in the belief that learning takes place only within a given locale--i.e., the classroom; within a given time--i.e., the class period; from a given source--i.e., the teacher; and to a given receptacle--i.e., the student. Thus phrased, the concept is ludicrous, but we are guilty of perpetrating this erroneous view of learning. Even more ridiculous is the other limit we place on learning. That is, there is only one way to teach, and, therefore, only one way to learn.

DEEP's answer to the problem of different learning styles is more practical than theoretical. Although as DEEP teachers we attempt to discover how our individual students learn best, we usually do not spend a great deal of time in the analysis of each student. Instead, the DEEP teacher attempts to create an atmosphere and to provide technical skills which make learning possible for each student, whatever that style or styles may be. In such an effort, flexibility and individualization are essential.

Traditionally in our academic courses we have aimed at meeting the needs of the visual/linguistic learner, the auditory/linguistic learner, and the concept-to-practice learner. The visual/linguistic learner can abstract concepts from the printed page and is one who presents concepts well in written form. The auditory/linguistic learner acquires information by hearing it through lectures, reports, and oral instructions. The concept-to-practice learner learns best using the deductive method, by learning a general concept and applying it to a specific instance.

But what of those with other learning styles? Some learners have been lost and ignored in the traditional method of instruction. They have failed to fit in. They have learring disabilities (or is it learning style dicabilities?). Traditionally in our academic classes we have not met the needs of the qualitative/experiences learner, the kinesthetic/tactile learner, or the practice-to-concept learner. The qualitative/experiences learner learns best by interacting with others in activities such as discussions and committee work. The kinesthetic/tactile learner learns best by doing, especially by touching or by physically completing a task. The practice-to-concept learner learns best by the inductive method, by examining specific instances and hypothesizing a general concept.

The DEEP classroom management system attempts to meet the needs of all learners by offering students choices in the areas of what they learn, how they learn, and how they present the results of their studies to others. In the DEEP classroom students still read and write reports if they choose to; that is, if the material learned lends itself best to that kind of presentation and if the student feels comfortable with this model. However, students have a variety of other methods of presentation available to them: video, slides, 8 mm movies, cassette tapes, models with salt/flour, papier mache, plaster of Paris, cardboard, mobiles, collages, posters, displays, or, more often, combinations of these media.

Essentially the DEEP classroom offers students more choices--in ways to learn as well as in what to learn--and often students who have not found much success previously in their academic classes respond positively to alternative methods of discovery and performance.

DISCIPLINE AND DEEP

Some comments on discipline and how discipline relates to the DEEP classroom are appropriate here.

Discipline is a difficult word to define because the term is highly emotionally charged for many people, educators, and patrons, and the word connotes different meanings for each of us. We know that discipline is relative, and that a disruptive situation in the eyes of one teacher may leave another teacher undisturbed. And each of us reacts differently at different times to student disruption depending upon many extraneous factors. Recent polls have indicated, however, that most people believe schools should be involved with "discipline." Yet, happily, most people see the development of self-discipline as preferable to mere obedience. However, learning self-discipline involves choice while obedience does not, and when students are allowed to make choices, we must be prepared to deal with what we, as teachers, determine to be "wrong" choices as well as "right" ones.

The beginning DEEP teacher may be apprehensive about discipline. Opening up a classroom admits more freedom, a certain amount of what is perceived as chaos, and, definitely more noise. However, there are certain advantages to the open classroom in the area of discipline.

In an open classroom students can legitimately move around and talk with other students, eliminating the problem of students shuffling or talking during a lecture situation. Also, because the class is often working in small groups on projects, the problem of the student who openly defies the teacher by some act of disruption, like dropping a book, is no longer present. If the teacher has been successful in developing a rapport (trust) with students,

individual problems can be dealt with individually on a one-to-one basis between teacher and student. The teacher no longer functions as the authority figure in the classroom and is, therefore, no longer thought of as part of the established order (us against them).

The major by-product of the DEEP classroom as far as discipline is concerned is the development of peer pressure. Students negotiate their own goals, and rules for classroom behavior, as well. A student who violates one of more of those rules is acting contrary to the class, to fellow students, rather than to the teacher. And, thus, the student must be ready to incur the admonishment of peers. This situation invaribly develops in the DEEP classroom.

DEEP teachers who are just beginning the program may have concerns related to the behavior of their students outside the classroom when the students are working on their projects out in the community. Again, the groundwork for such behavior must be laid well in advance of students' actually leaving the room. Ground rules for behavior must be thoroughly discussed before the event.

Many veteran DEEP teachers avow that they have no discipline problems in DEEP classes. This concept is difficult for others to accept. When pressed for more specific information, these DEEP teachers explain that they do not encounter discipline problems which they cannot deal with effectively themselves. In other words, they seldom meet a situation where it is necessary to throw up their hands and send the student to the office.

EQUIPMENT, MATERIALS AND SUPPLIES

One of the components of the Project DEEP model is the student use of media (audio-visual) presentations. Students prepare presentations for use in class; thus they take an active role in their own learning. This method is contrary to teachers' preparing presentations for use in class which places the student in a passive role. In a traditional classroom situation, it is easy for a student to be physically present while mentally escaping from teacher-dominated discussion, reading and recitation. It has been discovered that (a) many students can learn when psycho-motor skills are involved; (b) many students lack thirty-five percent adequate verbal skills to express themselves; and (c) the Project DEEP program has found that the use of media by students in project preparation requires the students to develop a higher order of both verbal and psycho-motor skills.

Most teachers in the traditional classroom, if they are honest with themselves, will admit that on a good day they have only about fifty percent of their students with them in class, mentally, as well as physically. With the actual physical involvement required in the Project DEEP model, a daily physical and mental committment from a class can be anticipated. The use of media develops a higher level of cognitive skills, such as interpreting, analyzing and evaluating data.

The use of media preparation equipment is not the essence of the DEEP program, but it does serve as a very helpful embellishment. Media should always be considered as a means to an end, rather than as an end in itself. One result can be expected when students are given equipment to do projects for the first time--whether the teacher is ready or not, an open classroom situation is created.

The equipment for media presentation development can be simple or complex according to the needs of the school and its budgetary limitations. It should also be realized that equipment can be shared by different departments of a school in order to get maximum utilization and value from the equipment. It must also be remembered that for best utilization, teachers must be trained in media use, and students must be permitted to operate the equipment. The more people who use the equipment, the greater the potential for damage. Hence, training of all those concerned in the use, operation, and simple preventative maintenance is essential.

Slide and Audio Tape Presentations

Use of slide and audio tape project preparation can be rewarding for both the student and the teacher. This type of project must be carefully planned through the use of a story board (explained in the DEEP Classroom Management manual). Photographs of situations, objects, or pictures from books are placed in a rational order to present an idea, story or illustration. To go along with these slides, students can make an audio tape with an audible beep to indicate slide change. If the presentations are adequately titled and prepared in this way, students can remove a project from a central filing place and watch it individually at some future time, as enrichment to a learning situation.

The following list contains suggested equipment and supplies needed for this type of audio-visual presentation:

Option 1

Kodak Ektagraphic kit	(contains Kodak 126 camera with adjustment for outdoor photography or close-up photography with copy stand included for two sizes of copies)

Light reflectors
Cassette tape recorder
Carousel slide projector
Carousel slide trays
Slide sorter

Option 2

Single lens reflex camera (35mm), case and close-up lenses
Copy stand
Blue filter Kodak 80b
Lights reflectors
Cassette tape recorder
Carousel slide projector
Carousel slide trays
Slide sorter

Supplies:

Film
Processing
Batteries
Bulbs

Prices of equipment will vary according to the quality of the single lens reflex camera purchased. Even though the single lens reflex camera is more costly, it is more versatile than the Ektagraphic kit and the quality of the pictures is usually superior. If no copy work is anticipated, any number of low-cost cameras, of the 126 and 135 types, can be used for outdoor work. It is recommended that the use of flash bulbs, flash cubes, and strobe lights be eliminated in favor of existing light photography.

Considerable money can be saved on film processing by buying mailers in quantity. Film can be purchased in 100 foot rolls and rolled in twenty or thirty-six exposure cassettes for economy. With bid processing and rolling one's own cassettes, the cost of processing and films can be greatly reduced.

Video Tape Presentations

Most of the portable video tape recorder equipment available on the market today is readily adaptable for use in the classroom. A minimum amount

of training is needed to use this equipment. The creativity of the operator is the only limiting factor governing the quality of the finished product. Rather than purchasing the hand-held equipment designed for use with sporting events, the teacher will find that the camera best for classroom use is one with an electronic viewfinder, mounted on a tripod and tripod dolly with adequate video cable to reach conveniently to the video-tape recorder.

Simulations, role playing, documentaries and interviews can be taped by students with the advantage of immediate replay. Many programs on commercial and educational television can be taped for use in the classroom, under most circumstances, without violating copyright laws.

The following is a suggested list of equipment for a single camera, video tape recorder with classroom set-up:

Color/cassette video-tape recorder
Color video camera with tripod and zoom lens
Dolly for tripod
Color TV monitor, 19"
Additional video cable
Light reflectors
Video cassette tapes
Extension cord

Sony, Panasonic, and JVC all produce good quality equipment for classroom use. Black and white, reel to reel equipment is less expensive, but is being phased out by manufacturers.

Super Eight Movie Presentations

A super 8 movie camera and projector can be utilized in the DEEP classroom. Super 8 is preferable to regular 8 because the quality of the finished product is superior. Regular 8mm is practically obsolete. 16mm equipment produces a better quality finished product, but the cost is generally far beyond the means of most school districts.

One important fact to remember in movie photography is that the shutter speed will remain constant. This leaves only the aperture and the film speed (Nasa number) to control the exposure. Indoor pictures, in most cases, will require the use of a light gun or bulbs and light reflectors for adequate light.

It is also important to shoot movies in sequence, if possible, as this reduces the amount of editing required to finish a presentation. As with the slide/tape presentations, a story board must be used to carefully plan the movie presentation in advance so that film is not wasted.

Two basic types of Super 8 presentations can be developed by students for classroom use:

(1) Scene movies including people, traffic, buildings, etc.

(2) Film collages made by copying pictures and parts of pictures from still photographs.

A Super 8 movie camera which will take scene movies can be purchased, used, in good condition very economically. A Super 8 movie camera for use in making film collages as described above is much more costly.

The suggested list of equipment includes both types of equipment.

Bolex Macrozoom Super 8 movie camera (scenes and collages)
Tripod
Kodak Hawkeye Super 8 Camera (scenes only)
Light reflectors
Movie editor
Movie splicer

For approximate current cost of equipment and materials, see separate sheet, "Suggested Materials for the DEEP Classroom."

SUMMARY OF THE MANAGEMENT MODEL

The DEEP classroom management system is described in detail in DEEP Classroom Management, another DEEP publication. However, for our purposes, it will be discussed briefly and generally in this section.

First of all, it should be noted that the DEEP classroom management model is flexible. It can be modified to meet a variety of educational situations. The model may be adopted for use within the traditional high school, junior high school, or middle school. DEEP is also being used in separate alternate facilities and with classes composed of gifted students. DEEP fits nicely in the typical schedule of approximately one-hour class periods, but it can be used in modular schedules. Although the DEEP class is more often managed by one teacher, it has also been applied in team-teaching and cross-disciplinary classes. Use of the DEEP classroom management system requires no adjustment in class size; that is, a regular sized class of twenty to thirty-five students can be accommodated with the model. DEEP is an appropriate management model in any academic course, although it has worked most successfully in the areas of social studies and language arts. It is suggested that the duration of the course in which the DEEP management model is used be at least a semester in length, or its equivalent in classroom time, as it takes a certain amount of preparation to develop student attitudes and skills necessary in the DEEP classroom.

Despite the flexibility of the DEEP management model, it contains one essential ingredient, without which a DEEP class cannot exist; that is, student involvement and participation in goal-setting, presentation and evaluation.

The typical DEEP classroom follows this management model.

1. DEEP students get acquainted with one another and with the teacher. Development of ownership begins.
2. DEEP students work together, usually in small groups to develop human relations and group processing skills.
3. DEEP students develop class goals.
4. DEEP students learn to operate equipment.
5. DEEP students begin to plan to prepare projects. They negotiate individual project goals and course of action with the instructor.
6. DEEP students work on projects.
7. DEEP students present projects.
8. DEEP students, with their classmates and the teacher, debrief and evaluate projects.
9. The project process repeats itself, with variations.
10. DEEP students, at the end of the grading period, rate themselves according to class and individual goals and, with the instructor, evaluate their progress.

EVIDENCE OF EFFECTIVENESS

Selection of DEEP Students:

Within the Wichita school system, students are assigned randomly by computer to classes in required courses such as Social Studies, American History and English. Students are not grouped by ability, attendance, or any other criterion.

Project DEEP required a specially equipped classroom, usually one per building. As a result, in buildings with only one DEEP classroom, only one class during each school hour participated in the project. Classes were randomly selected to use DEEP facilities.

The method of selecting students to participate in Project DEEP is very important for evaluating the Project's effectiveness. The random assignment of students to classes and the random selection of classes to use DEEP classrooms justifies the assumption that DEEP students were like the parent population, non-DEEP students, in terms of absenteeism, drop-outs and attitude. As a result of this random selection procedure, the question of program effectiveness asks how DEEP students compare to non-DEEP students in terms of absenteeism, drop-outs, and attitude.

Effects on Behavior:

Decreased absenteeism and drop-outs were two broad behavioral goals of Project DEEP. Table II summarizes absence and drop-out rates for the three high schools with DEEP classrooms. Since the project students were randomly drawn from the entire population of these three high schools, we would expect daily 12.3% of the DEEP students to be absent. In fact, only 8.6% of the DEEP students were absent, a significant decrease of 30% in rate of absences ($p \leq .01$).

Similarily the rate of drop-outs was significantly lower for DEEP students as compared to the population from which they were selected. Table II shows the rate of drop-outs decreased by 37% from an expected rate of 12.7% to 8.0%, significant at the $p \leq .001$ level.

Table II clearly shows that students participating in Project DEEP had significantly fewer absences and drop-outs than their peers.

Effects on Attitudes:

Project DEEP's purpose was to improve the behavior and attitudes of secondary students in schools where drop-outs, absenteeism and poor attitudes are existing problems. While significant changes in drop-out and absenteeism behavior were clearly demonstrated, measuring attitudes and significant changes in attitudes is a more difficult task. Attempting to examine attitudes, Project DEEP used pre-post rating scales with DEEP students and their parents.

TABLE II
ABSENCES AND DROP-OUTS
72-73

GROUP	N	ABSENTEEISM		DROP-OUTS	
		AVERAGE DAILY ABSENCES	% ABSENT DAILY	NUMBER OF DROP-OUTS	% OF DROP-OUTS
CONTROL (NON-DEEP)	6975	858	12.3%	886	12.7%
EXPERIMENTAL (DEEP)	711	61	8.6%	57	8.0%
		DECREASED 30% FOR DEEP STUDENTS		DECREASED 37% FOR DEEP STUDENTS	
SIGNIFICANCE (df=1)		x^2 =7.77, p≤ .01		x^2 =12.1, p≤ .001	

Student Reported Changes in Attitudes. Using the Risk Taking Attitude Values Inventory (RTAVI), DEEP students showed systematic improvement in their ratings of the attitude areas of affection, respect and the value of knowledge. While the scale was given to all DEEP students on a pre-post basis, an error in administration resulted in about 50% of the posttests not being compatable with machine scoring. Nevertheless, as shown in Table III, DEEP students significantly changed the reporting of their attitudes in these areas.

While significant changes were noted, how do these scores compare to scores from non-DEEP students? The Educational Assistance Institute, the group responsible for scoring and summarizing the RTAVI data, provides standard scores and percentile ranks for comparisons of DEEP's data to national norms. Table III shows that in the attitude area of affection, DEEP students started the program at the 2nd percentile. In the areas of respect and the value of knowledge, DEEP students began at the 5th and 65th percentile ranks respectively and ended in the 42nd and 99th percentiles.

Parent Opinion of Changes in Student Attitude. A sample of parents of DEEP students were asked to respond to a questionnaire at the beginning and again at the end of the school year. The first four statements of the questionnaire referred to Project DEEP's effects on student attitudes toward school, other students, themselves and teachers (see Table IV). Parents were asked to make a mark on a line, as shown in Table IV, indicating the extent to which they agreed with each statement.

Parents reported small yet significant improvement in the attitudes of their students toward school, other students and themselves. From the parent's point of view, the largest and most significant gains were shown in improvement in DEEP students' attitude toward their teacher.

To summarize, significant and desired attitudinal changes were reported by students and parents. While these data consisted essentially of opinions, they do parallel the documented changes in the behavior of Project DEEP students.

TABLE III

STUDENT RESPONSES ON THE

RISK TAKING ATTITUDE VALUES INVENTORY (RTAVI)

AREA		PRE	POST	POST VS PRE
AFFECTION	N	240	115	
	$\bar{X}$	3.3	3.7	t=3.28
	SD	.967	.877	* p=.005
	SCORE	-2.0	2.3	
	% RANK	2%	99%	
RESPECT	N	241	115	
	$\bar{X}$	3.3	3.6	t=2.76
	SD	.999	.861	* p=.005
	SCORE	-1.5	-.1	
	% RANK	5%	42%	
KNOWLEDGE	N	239	114	
	$\bar{X}$	3.1	3.3	t=1.85
	SD	.972	.885	* p=.05
	SCORE	.5	2.8	
	% RANK	65%	99%	

* level of significance for one-tailed test

TABLE IV

PARENT OPINION SURVEY

1 2 3 4 5

Disagree Agree

TOPIC	PRE	POST	POST VS PRE
Since my student has been in Project DEEP this year, he (or she) has improved his (or her) attitude about the school system.	N 104 $\bar{X}$ 3.1 SD .671	N 98 $\bar{X}$ 3.3 SD .730	† 2.02 SIG < .025
Since my student has been in Project DEEP this year, he (or she) has improved his (or her) attitude concerning other students in the school.	N 96 $\bar{X}$ 2.7 SD .801	N 102 $\bar{X}$ 3.0 SD .764	† 2.68 SIG < .005
Since my student has been in Project DEEP this year, he (or she) has improved his (or her) attitude about himself (herself).	N 108 $\bar{X}$ 3.3 SD .692	N 99 $\bar{X}$ 3.6 SD .657	† 3.18 SIG < .005
Since my student has been in Project DEEP this year, he (or she) has improved his (or her) attitude about the teachers in the school.	N 97 $\bar{X}$ 2.9 SD .713	N 95 $\bar{X}$ 3.4 SD .725	† 4.79 SIG < .0005
Since my student has been in Project DEEP this year, he (or she) has improved in his (or her) ability to function as an individual within the system.	N 101 $\bar{X}$ 2.9 SD .619	N 100 $\bar{X}$ 3.8 SD .592	† 10.5 SIG < .0005
Most parents in this school district agree with the concepts and philosophies of Project DEEP.	N 95 $\bar{X}$ 2.9 SD .743	N 101 $\bar{X}$ 3.1 SD .784	† 1.82 SIG < .05

Educational Importance:

While Project DEEP produced significant changes in the behavior and attitude report of the students it served, the question still remains: Did Project DEEP produce educationally important results? We think yes for several reasons: 1) The Wichita School District, after federal funding, is continuing the project; 2) District Principals, usually a tough group to convince, support Project DEEP; 3) Several districts across the country have adopted or adapted Project DEEP; 4) Follow-up data show that 98% of the DEEP students graduated compared to 91 to 94% for non-DEEP students; and 5) By decreasing absenteeism and drop-out rate Project DEEP is helping return lost state aid to district budgets.

One indicator of a project's educational importance is whether or not the local district continues the project after federal support ends. For the 1975-76 school year the Wichita Public Schools has allocated $20,000 for Project DEEP, not including teacher salaries. This commitment clearly demonstrates that the local district considers Project DEEP to be educationally important.

While continued local financial support is one indicator of a project's educational value, another is the support provided by middle management, in this case, principals. Usually a tough group to convince, district principals support the educational importance of Project DEEP as shown in Table V. By the end of the '74 school year, principals generally agreed with all of the statements shown in Table V. They strongly agreed that the DEEP staff provided effective communication, that DEEP should be made available to students as an alternative education in required subjects, that DEEP helped students improve attitudes toward school, and that DEEP's staff was effective in implementing the project in each school. Extensive principal support indicates the educational importance of Project DEEP.

Another indicator of the educational importance of Project DEEP is the fact that it is being implemented in other school districts. For example, Project DEEP is now functioning in Austin, Texas, and Omaha, Nebraska. The fact that other districts are implementing Project DEEP demonstrates not only its educational importance but also its wide applicability and transportability.

A follow up study provided two additional facts supporting the educational importance of Project DEEP. 98% of Project DEEP Juniors later graduated, as compared to 91 to 94% non-DEEP Juniors in the Wichita Public Schools. When asked, 86% of the DEEP graduates stated that they felt they would not have stayed in school except for DEEP classes. Increased graduation and student acknowledgement of Project DEEP's contribution to the increase attest to the educational importance of Project DEEP.

TABLE V

PRINCIPAL OPINION SURVEY
73-74

1 2 3 4 5
Disagree Agree

TOPIC	PRE	POST	POST VS PRE
1. Project DEEP classes have helped to promote better student attitudes towards this school.	N 10 X 3.5 SD .663	N 11 X 4.4 SD .551	t 3.30 SIG*<.005
2. Project DEEP and its philosophies should be expanded.	N 10 X 3.4 SD .845	N 11 X 3.9 SD .851	t 1.49 NS
3. Higher administration should be asked for money to expand Project DEEP.	N 10 X 2.9 SD .817	N 11 X 3.8 SD 1.00	t 2.27 SIG<.025
4. Project DEEP should be made available to students as an alternative education in required subjects.	N 10 X 4.1 SD .861	N 11 X 4.7 SD .584	t 1.70 NS
5. The Project DEEP staff has been effective in implementing DEEP in this school.	N 11 X 3.4 SD 1.17	N 11 X 4.4 SD .674	t 2.32 SIG*<.025
6. The Project DEEP staff has been effective in communicating with us.	N 11 X 4.1 SD .782	N 11 X 4.8 SD .480	t 2.48 SIG*<.025

*Level significance for one-tailed test.

By improving student attitudes about school and decreasing absenteeism and drop-out rates, Project DEEP is helping the Wichita School District financially and that is educationally very important. Most states provide state aid based on average daily attendance. While the amount of state reimbursement varies from state to state and district to district, let's use $400 per pupil for an average for the 1975-76 school year for larger city schools where absenteeism and finances are especially critical issues. By reducing daily absenteeism from 12.3 to 8.6%, on the day or days when the state requires a head count, we will expect 3.7 more students present for every 100 students served. For a high school serving 2,000 students, 74 more will be present each day. At $400 each, this means our sample high school will generate $29,600 more in state reimbursements each year.

Project DEEP offers individual students direct services improving their attitudes related to school and their attendance and drop-out behavior. DEEP is a cost-benefical program. Its benefits are demonstrated in terms of human resources while saving schools money. And that, you'll agree, is educationally important.

STUDENTS TALK ABOUT PROJECT DEEP

The following comments are examples of students evaluating their experience in the project. Nothing has been changed. We have typed exactly what the students wrote, mistakes in spelling and grammar included.

I loved the class it was my favorite hour. You are a very good teacher for this type of class you dont have a temper.

I had a smashingly good time.

I feel like I have become more active after taking this class.

I think that the class is good like it is. It is a way to learn different things that a teacher can't instruct from a book. It gives people a chance to see how much they can accomplish on their own/or with their friends. This is a interesting--different way of school

I really enjoyed the class. It was something different to experience. This type of class makes you want to come to class because you do things you like to do and enjoy. Class Mates were nice and friendly.

I liked this class because it made me open up more to people.

Its different then the other classes because you do it yourself you learn more by doing it yourself.

I liked this class cause we never had anything like it where I came from.

I like it because it's different, fun. You don't have to sit and listen and get bored and tune the teacher out.

It's such a relaxed atmosphere. You get so tired of the regular schedule of school that you sometimes learn more if you just relax. Its fun to work with the video equipment. We got to do things we might not have ever had the opportunity to do.

you got to work by yourself, and pick your own project, or you could work with someone if you wanted to. You learn more by going out in the world and gathering evidence of a subject, than sitting in a classroom, and hear what has been taught to you in elementary.

It's a farout class I dug it alot. The teacher was nice and let you do your own thing.

I liked the off campus projects that we got to do they were very interesting. I learned alot & got alot from the projects that I got to do. The class was very interesting and I learned alot about what was happening to the world around me by the projects that I did.

Had our freedom to be independent and do our own thing. We also learned a little about different people and what there interests were. It also proved that some high school kids can do there school work without sitting in a class everyday getting bored.

You can do your work without a teacher standing over you & you could express yourself any way possible.

I like doing the projects at my own rate. Doing the kinds of things you wanted to do and not having someone pressure you into it.

I think that doing projects on your own and being more free, and feeling the responsibilities of being free are good. And not like most teachers it gives you a good feeling to know that you're trusted to be on your own.

It gave the students in it a chance to use their heads and express their ideas. It gave the teacher a different view of the students. Instead of seeing the students as students and students only she got to see them as people.

the students were independent and I like that. The teacher can find the lazy workers who do not deserve a good grade fast.

Getting out of ordinary class--getting involved with other things than school. example--symphony, Wichita--TV--News etc. It was also good gradewise because you couldn't sit on your ass and get an A. You had to get involved one way or another or get out. But you were free